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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,981	01/03/2002	Hyun Joo Hwang	K-0384	9142
34610	7590	06/24/2004	EXAMINER	
FLESHNER & KIM, LLP			TRINH, MINH N	
P.O. BOX 221200			ART UNIT	PAPER NUMBER
CHANTILLY, VA 20153			3729	

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/033,981

**Applicant(s)**

HWANG, HYUN JOO

**Examiner**

Minh Trinh

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2002.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 03 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Applicant is required to amend the claim(s) to place the claim(s) in proper dependent form. Therefore, "An index head " (claims 2-15) should be changed to: --  
The index head--, to reflect the dependent claim formats.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The following are examples:

The phrase: "movable in any direction" (claim 1, line 3) is unclear and confusion in that it is not known what direction being referring in reference to X, Y, Z coordinating system.

The phrase: "mounting /dismounting to/from test sockets" should be revised to: --  
mounting and dismounting from test sockets--, to clarify the claimed subject matter in which applicant is intend.

"a plurality of heads " (see claim 1., line11 ) is not agreed and is unclear because in the preamble claim 1, line 1 is clearly directed to a single "index head ".  
Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 4, 5, 14 and 15 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayama et al (US 6,104,204).

Hayama et al disclose at least one index head for use in a test handler device, for holding semiconductor comprising: a carrier base 70 fixedly fitted to a transfer device movable in any direction (see Fig. 1); an elevating carrier 60R coupled to the carrier base 70 to be movable in up and down directions (see Fig. 1, up and down arrows); elevating means 60 for moving the elevating carrier in up and down directions with respect to the carrier base (see Fig. 1); a head holder 63B under the elevating carrier coupled to the elevating carrier via a guide member 35B (see related Fig. 7) for making relative movement with respect to the elevating carrier in up and down directions (by arrows shown in Fig. 7); and a plurality of heads each including a holding part fixedly

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fitted to a bottom of the head holder for holding the semiconductor device by vacuum (see the discussion at col. 6, lines 21-22). Hayama et al do not teach a heating part on top of the holding part for transfer of a heat to the semiconductor device directly when the semiconductor device is mounted in the test socket, and a compliance part fitted over the heating part for providing degrees of freedom for an alignment between the semiconductor device held by the holding part and the test socket. Regarding the above features. It would have been an obvious matter of design choice to have a heating part place on top of the holding part and a compliance part fitted over the heating for alignment purpose since applicant has not disclosed that these features are critical, patentably distinguishing features and it appears that the invention would perform equally well with the configuration where the heating part being used as taught by the prior art reference (see the discussion at col. 3, lines 17). Note that reference 70 of the applied art is read on the claimed "carrier base" of the present application. Furthermore, the limitation recites " i.e., for holding . . . , for moving . . . , for making . . . , etc." (see claim 1, lines 1-2, lines 6-7, 9-10, etc.) are considered functional intended use, since the prior art shown every structure element as claimed by applicant then it is capable of performing such functional intended use as discussed above.

Limitations of claims 4-5 are also satisfied by Hayama et al (refer Figs. 1 or 7 each shows the features recited in these claims, i.e., guide member =pin for inserted, and coupled to holes in the elevating carrier).

As applied to claims 14 and 15, noting Hayama's Fig. 1 or 7, depicts the similar features and its associated functional i.e., guiding and/or rotation as broadly claimed in claims 14-15 of the present application.

#### ***Allowable Subject Matter***

7. Claims 2-3, 6-12 and 13 would be allowable if rewritten to overcome the claim objections and the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. That the prior art does not teach the limitations as recited in details in these claims.

#### ***Prior Art References***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art references are cited for their teaching of testing head for IC devices or the like.

#### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (703) 305-2887. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Minh Trinh 6/21/04  
Patent Examiner Group 3729

mt